

## **Understanding the Efficacy of Floating Treatment Wetlands on Hayden Lake: Part II**

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Floating wetland technology (FTW) has been shown to remove nutrients (specifically phosphorus), decrease biological oxygen demand, and reduce total suspended solids in wastewater treatment systems ranging from 300 gallons per day (gpd) to multi-million gpd municipal or industrial treatment systems. A multi-partner study was completed on Hayden Lake in north Idaho to understand the efficacy of the FTW on an open-water lake.

A total of 8 experimental FTWs were deployed on Hayden: four FTWs in the northern arm of Hayden Lake, where blue-green algae blooms occur on a more frequent basis and trophic conditions are meso-oligotrophic (TP = 12-24  $\mu\text{g/L}$ ); and four experimental FTWs in the southern region of the lake, where blue-green algae blooms have not been observed to occur and trophic conditions are oligotrophic (TP = 6-12  $\mu\text{g/L}$ ).

Monitoring of the project includes two components: a mass balance to quantify phosphorus (P) sequestered in plants of the FTWs, and water quality monitoring to determine any changes in water TP as a result of uptake via the FTWs. This session will summarize results of the mass balance portion of the study.